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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/743,389	12/23/2003	Masahiko Matsukawa	21581-00310-US	7940

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EXAMINER
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KRUEER, KEVIN R

ART UNIT	PAPER NUMBER
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1773

DATE MAILED: 09/28/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/743,389

Applicant(s)

MATSUKAWA ET AL.

Examiner

Kevin R. Krueer

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 27 June 2006.  
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-3,7-11,13-15,17,18 and 21-26 is/are pending in the application.  
4a) Of the above claim(s) 22-26 is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 1-3,7-11,13-15,17,18 and 21 is/are rejected.  
7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.  
10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All b) ☐ Some \* c) ☐ None of:  
1. ☒ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.  
5) ☐ Notice of Informal Patent Application (PTO-152)  
6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Specification***

1. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

### ***Election/Restrictions***

2. Newly submitted claims 22-26 directed to an invention that is independent or distinct from the invention originally claimed for the following reasons: said claims are drawn to a non-elected method of using the claimed conversion coating composition.

Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, claims 22-26 are withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

### ***Claim Rejections overcome by amendment***

3. The rejection of claims 2, 14, and 17 and 21 under 35 U.S.C. 102(b) as being anticipated by Hauser US 6,312,812) has been overcome by amendment. The reference does not teach the claimed water-soluble epoxy compound containing an isocyanate group.

4. The rejection of claims 1-3, 7-11, 13-15, 17, 18, and 21 under 35 U.S.C. 103(a) as being unpatentable over Dolan (US 5,449,415) in view of McMillen et al (US

5,653,823) has been overcome by amendment. The references do not teach the claimed epoxy compound comprising an isocyanate group.

***Claim Rejections - 35 USC § 103***

5. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

6. Claims 1, 3, 7-10, 13-15, 17, 18, and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dolan (US 5,449,415) in view of WO01/48264 (herein referred to as Sako).

Dolan teaches a chromium free conversion coating for a metal substrate (abstract). The metal substrate may be iron, aluminum, zinc, steel and alloys thereof (col 1, lines 13+). The surface of the metal is degreased rinsed with water, and then contacted with the pretreatment composition (col 9, lines 48+). The pretreatment is applied solution is applied in amounts of 5-500mg/m<sup>2</sup> (claim 17). The pretreatment composition comprises the following components:

- A transition metal element (abstract) chosen from the group consisting of zirconium, titanium, and hafnium (abstract) in amounts of 0.15-1.0M/kg (col 5, lines 33+);
- A fluorine-containing materials as a source of fluorine ions (abstract-component (i))
- 1-10wt% of a water soluble or water-dispersible organic polymer (component E-abstract) such as an epoxy or aminoplast (col 5, lines 66+);

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- Acid in amounts sufficient to adjust the pH of the treating solution to about 0.5-5 (abstract);
- Cobalt, magnesium, nickel, tin, iron, copper, zinc ions (col 6, lines 20+);
- And silica (table 2)
- optionally a peroxide (component F) in amounts to provide a concentration of oxidizing equivalents per liter or composition that is equal to that of a composition comprising 1-9wt% hydrogen peroxide (col 6, lines 19+)-herein relied upon to read on the reaction accelerator.

Dolan does not teach the organic resin may comprise an epoxy compound containing an isocyanate group. However, Sako teaches a chromium-free rinse composition wherein the organic resin of said composition comprises cation modified epoxy resin Adekaresin™ (page 19, d3), one of applicant's preferred epoxy resins containing an amino group (see page 8 of the specification). Sako further teaches said resin may be crosslinked with an isocyanate group (page 15, lines 9+). Said resin improves the corrosion resistance, fingerprint resistance and workability of the composition (page 3, lines 4+). Thus, it would have been obvious to one of ordinary skill in the art to utilize the isocyanate cured Adekaresin taught in Sako as the water-soluble or water dispersable organic polymer taught in Dolan. The motivation for doing so would have been to improve the composition's corrosion resistance, fingerprint resistance and workability of the composition.

7. Claims 1, 3, and 7-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Das (US 3,964,936) in view of WO01/48264 (herein referred to as Sako).

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Das teaches a chromium free conversion coating for an aluminum substrate (abstract). The pretreatment is applied solution is applied in amounts of 10-35mg/ft<sup>2</sup> (col 8, lines 14+). The pretreatment composition comprises the following components:

- Zirconium (abstract) in amounts of at least about 50ppm (col 6, lines 5+);
- fluorine (abstract)
- further said composition may comprise an acid in amounts sufficient to adjust the pH of the treating solution to about 3-5 (col 7, lines 15+);

Das does not teach an organic resin comprising an epoxy compound containing an isocyanate group may be added to the composition. However, Sako teaches a chromium-free rinse composition wherein the organic resin of said composition comprises cation modified epoxy resin Adekaresin<sup>TM</sup> (col 15, d3), one of applicant's preferred epoxy resins containing an amino group (see page 8 of the specification). Sako further teaches said resin may be crosslinked with an isocyanate group (col 12, lines 14+). Said resin improves the corrosion resistance, fingerprint resistance and workability of the composition (col 5, lines 47+). Thus, it would have been obvious to one of ordinary skill in the art to utilize sufficient amounts of the isocyanate cured Adekaresin taught in Sako to the conversion coating composition taught in Das. The motivation for doing so would have been to improve the composition's corrosion resistance, fingerprint resistance and workability of the composition.

8. Claims 2, 11, 13-15, 17, 18, and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Das (US 3,964,936) in view of WO01/48264 (herein referred to

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as Sako), as applied to claims 1, 3, and 7-10 above, and further in view of Dolan (US 5,449,415).

Das in view of Sako is relied upon as above, but does not teach the claimed amount of hydrogen peroxide may be added to the composition. However, Dolan teaches a chromium free conversion coating composition optionally comprising hydrogen peroxide in the claimed amounts as an oxidizing agent. Thus, it would have been obvious to add hydrogen peroxide in the claimed amounts to the chromium free conversion coating composition taught by Das in view of Sako. The motivation for doing so would have been that Dolan teaches such amounts of hydrogen peroxide may be added to conversion coatings as oxidizing agents.

With regard to claim 14, Das teaches the composition will comprise zirconium ions.

With regards to 17 and 18, and 21, Das does not teach the composition may comprise silica. However, Dolan teaches silica may be added to conversion coating compositions as a forming agent (col 8, lines 38+). Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to add silica to the composition taught in Das because Dolan teaches silica may be added to a conversion coating composition as a forming agent.

### ***Response to Arguments***

Applicant's arguments with respect to the pending claims have been considered but are moot in view of the new ground(s) of rejection.

***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kevin R. Kruer whose telephone number is 571-272-1510. The examiner can normally be reached on Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Carol Chaney can be reached on 571-272-1284. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.



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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Kevin R. Kruer  
Patent Examiner-Art Unit 1773